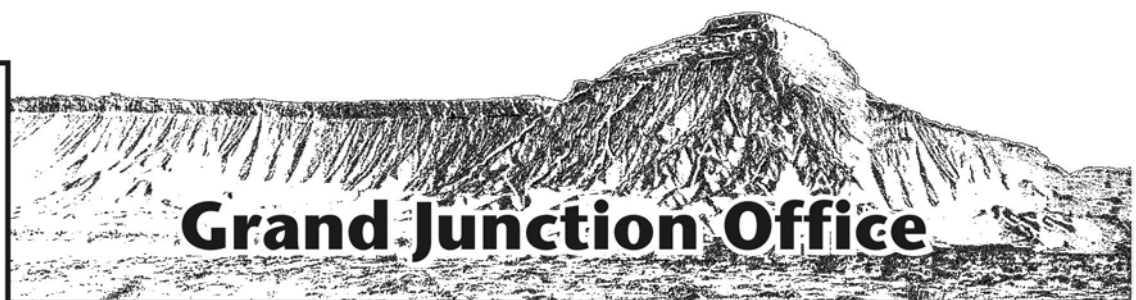


Hanford Tank Farms Vadose Zone Monitoring Project

Quarterly Summary Report for Third Quarter Fiscal Year 2003

August 2003



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**Quarterly Summary Report for
Third Quarter Fiscal Year 2003**

August 2003

Prepared for
U.S. Department of Energy
Idaho Operations Office
Grand Junction Office
Grand Junction, Colorado

Prepared by
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Approved for public release; distribution is unlimited.
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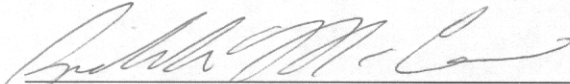
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A.W. Pearson
S.M. Stoller, Hanford

8/1/03
Date

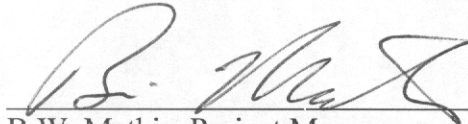
Concurrence:



R.G. McCain, Hanford Technical Lead
S.M. Stoller, Hanford

8/1/03
Date

Approved by:



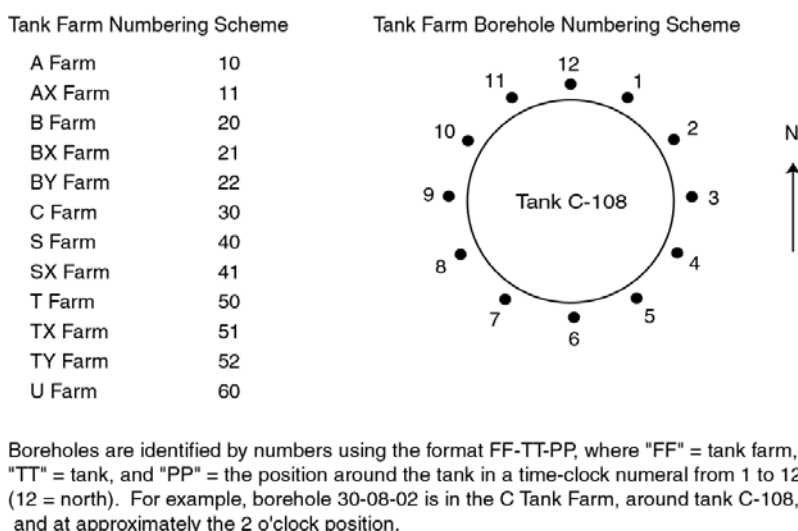
B.W. Mathis, Project Manager
S.M. Stoller, Grand Junction Office

8/1/03
Date

1.0 Introduction

Routine quarterly reports for the Hanford Tank Farms Vadose Zone Monitoring Project are issued to summarize the results of monitoring activities, to provide the status of any on-going special investigations, and to provide an updated listing of borehole intervals where monitoring is planned in the coming months.

For readers not familiar with the Hanford Tank Farms borehole numbering scheme, the following illustration shows how to identify the location of a borehole from its identification number:



2.0 Monitoring Results

A summary of monitoring operations from April 1 to June 30, 2003 is included in Table 2-1.

Table 2-1. Summary of Monitoring Operations for 3rd Quarter of FY 2003

Month	April	May	June	FY Cumulative Total
Total Boreholes	33	36	36	274
Main Log Footage	2206	2090	1775	16,968.5
Rerun Log Footage	100	90	70	680
Total Footage	2306	2180	1845	17,648.5

Appendix A provides further details of boreholes monitored during the 3rd quarter of FY 2003, including borehole number, tank number, logging depths and footage, total score (logging priority), projected next monitoring date, dates of High Rate Logging System (HRLS) logging events, dates of RAS monitoring events, and a comment section. This table is derived from the project's monitoring database, which is continually updated (DOE 2003b). Boreholes are selected by a priority score (total score) that emphasizes proximity to tanks with significant

drainable liquid remaining, and/or the presence of contaminant plumes, or where possible contaminant movement is suspected. The most significant change that occurs in the database is the monitoring frequency. Where monitoring results suggest possible contaminant movement, the monitoring frequency and monitoring depth intervals may be changed. Monitoring frequencies may also be changed in response to special requests (e.g. in support of retrieval operations). As discussed in Section 7.0 of the *Annual Monitoring Report for Fiscal Year 2002* (DOE 2003a), some lower priority boreholes were selected for monitoring. This re-prioritization included boreholes in the vicinity of tanks undergoing salt well pumping and those being considered for closure in the near future, such as in C Farm.

A total of 105 boreholes were monitored during the third quarter of FY 2003. The following sections describe the routine monitoring performed in each tank farm. In the interest of brevity, plots for boreholes where no apparent change was observed will not be included in this report. These logs are available on request.

2.1 A Tank Farm

A total of 15 boreholes located around tanks A-101, -104, -105, and -106 were monitored in A Farm this quarter. No apparent changes in the radionuclide contaminant distribution were observed.

2.2 AX Tank Farm

A total of 5 boreholes located around tanks AX-101, -102, -103, and -104 were monitored in AX Farm this quarter. No apparent changes in the radionuclide contaminant distribution were observed. Borehole 11-02-04 could not be monitored due to an obstruction, probably a broken well cap, at 37 ft.

2.3 B Tank Farm

A total of 8 boreholes located around tanks B-101, -106, -107, and -110 were monitored in B Farm this quarter. No apparent changes in the radionuclide contaminant distribution were observed.

2.4 BX Tank Farm

A total of 3 boreholes located around tanks BX-106 and -111 were monitored in BX Farm this quarter. No apparent changes in the radionuclide contaminant distribution were observed.

2.5 BY Tank Farm

A total of 10 boreholes located around tanks BY-103, -106, -107, -108, and -110 were monitored in BY Farm this quarter. No apparent changes in the radionuclide contaminant distribution were observed. Boreholes 22-03-04, 22-07-02, 22-07-05, and 22-08-05 exhibited evidence of

movement during past monitoring events, but failed to show signs of additional movement during the latest monitoring event.

2.6 C Tank Farm

A total of 28 boreholes located around tanks C-101, -103, -104, -105, -106, -107, -108, -109, and -111 were monitored in C Farm this quarter. Eight of these boreholes were monitored to support pending C-106 retrieval operations and are discussed in more detail in Section 3.1.

Measurements in borehole 30-06-10 indicate a possible increase in ^{137}Cs concentrations at depths of 4 to 5 ft since the previous RAS measurements acquired on January 2003 (Appendix B). This borehole is currently monitored on a 3-month basis. Measurements in borehole 30-08-02 continue to show downward movement of ^{60}Co between the depths of 57 and 65 ft (Appendix B). This ^{60}Co anomaly was first discovered with RAS measurements collected on 9/11/02 and later confirmed with RAS measurements collected on 9/12/02 and 1/21/03.

Measurements collected in borehole 30-08-03 showed a decrease in the total and cesium window counts back to baseline levels (Appendix B). This borehole was flagged as indicating a possible increase after the initial RAS monitoring event on 1/22/03. The increase may have been caused by radon. The casing in this borehole is perforated.

There are a number of boreholes in C Farm that have various problems that either prevent monitoring or reduce the monitoring depth interval. Boreholes 30-00-01 and 30-05-07 both have obstructions at depths of 61 and 48 ft, respectively. These obstructions appear to be well caps that have been broken and lodged in the boreholes. Borehole 30-03-01 is covered by stairs and cannot be monitored. Borehole 30-03-03 is full of water and cannot be monitored. Borehole 30-06-03 contains water at approximately 80 ft. This borehole is located in a depression next to the footing of a building. The well cap becomes submerged in water during periods of heavy rain.

2.7 S Tank Farm

A total of 4 boreholes located around tanks S-103, -104, -107, and -111 were monitored in S Farm this quarter. No apparent changes in the radionuclide contaminant distribution were observed.

A number of boreholes in S Farm have various problems that either prevent monitoring or reduce the monitoring depth interval. Boreholes 40-04-08, 40-07-08, and 40-07-10 are covered by concrete shielding and cannot be monitored. Borehole 40-03-09 has an obstruction at 37 ft that prevents monitoring below this depth. This obstruction appears to be a broken well cap that is lodged in the borehole.

2.8 SX Tank Farm

Routine monitoring was not performed in SX Farm this quarter.

2.9 T Tank Farm

A total of 15 boreholes located around tanks T-101, -102, -104, -105, -106, -108, and -109 were monitored in T Farm this quarter. Measurements collected in borehole 50-02-05 showed a possible increase in ^{137}Cs concentrations between 39 and 41 ft (Appendix B). The monitoring event in this borehole on 8/28/02 showed a similar increase. Measurements collected in borehole 50-06-18 continue to show a possible increase in ^{60}Co concentrations between 117 and 119 ft (Appendix B). The previous four monitoring events in this borehole have all shown similar increases.

There are a number of boreholes in T Farm that are full of water, making them unsuitable for monitoring. Boreholes 50-03-06, 50-05-06, 50-07-07, and 50-08-11 are all full of water. These boreholes all have sealed bottoms. The source of the water in these boreholes is likely surface/rain water. T Farm has a history of flooding as a result of abnormal precipitation and/or rapid snowmelt (Hodges 1998). Most boreholes in T Farm are double cased and grouted; therefore, it is likely that there are additional boreholes that are filled with water.

2.10 TX Tank Farm

A total of 9 boreholes located around tanks TX-101, -103, -104, -105, and -107 were monitored in TX Farm this quarter. No apparent changes in the radionuclide contaminant distribution were observed.

Borehole 51-01-09 could not be located. This borehole may have been buried when clean gravel was spread across the surface of this farm in the late 1990s.

2.11 TY Tank Farm

A total of 8 boreholes located around tanks TY-103, -105, and -106 were monitored in TY Farm this quarter. Measurements collected in borehole 52-06-05 continued to show a possible increase in ^{60}Co concentrations between 130 and 147 ft (Appendix B). The first two RAS monitoring events in this borehole on 5/14/02 and 12/4/02 both showed similar increases. The ^{137}Cs movement identified in borehole 52-03-06 during the initial RAS monitoring event has remained stable in all subsequent monitoring events (Appendix B).

2.12 U Tank Farm

Routine monitoring was not performed in U Farm this quarter.

3.0 Special Investigations

3.1 Tank C-106 Retrieval Monitoring

Monitoring of eight boreholes in the vicinity of tank C-106 (C Farm) was performed during the 3rd quarter of FY 2003 in response to a request from CHG tank waste retrieval operations. These boreholes were all monitored just prior to the start of the C-106 retrieval operations. These data and the RAS data collected from these boreholes during January 2003 will provide a baseline against which future measurements collected during waste retrieval operations can be compared (Appendix C). These boreholes have been tentatively assigned a monitoring frequency of 3 months. The next RAS monitoring event is scheduled for August 2003.

Moisture logging in seven of these boreholes was also conducted in April 2003 to provide a pre-retrieval moisture baseline (Appendix C). CHG will use manually operated hand-held neutron moisture gauges to collect measurements from selected depths in these boreholes at frequent intervals during retrieval operations. These measurements will be compared against the moisture baseline. Moisture logging may be conducted again in the future to assess any significant changes detected with the neutron moisture gauges.

3.2 Tank S-102 Retrieval Monitoring

In anticipation of future tank S-102 (S Farm) retrieval activities, all boreholes surrounding this tank have tentatively been assigned a monitoring frequency of 6 months (biannual). This frequency may change when the retrieval project monitoring requirements are finalized. No tank S-102 retrieval monitoring was performed during this quarter. The baseline RAS monitoring event is scheduled for July 2003.

3.3 Tank S-112 Retrieval Monitoring

Monitoring of boreholes in the vicinity of tank S-112 (S Farm) is being performed in response to a verbal request from CHG tank waste retrieval operations, in anticipation of planned retrieval operations. RAS data were collected in six boreholes during June 2002 to provide a baseline against which future measurements collected during waste retrieval operations can be compared. The six boreholes have tentatively been placed on a monitoring frequency of 6 months (biannual) until retrieval project monitoring requirements are defined. In the event retrieval operations do not commence, the next routine RAS monitoring event is scheduled for September 2003.

3.4 Tank U-107 Retrieval Monitoring

A special investigation of boreholes around tank U-107 (U Farm) has been completed. A final report, *Evaluation of Log Data in the Vicinity of Tank U-107* (DOE 2003c), summarizing all measurements, was prepared and issued in June 2003. This investigation was initiated in June 2001 at the request of the DOE-ORP Project Manager to support waste retrieval operations. It has been concluded that the retrieval operations had no effect on the vadose zone in the

vicinity of the tank. One more quarterly monitoring event is scheduled during August 2003. These boreholes will subsequently be returned to routine monitoring on an annual basis.

4.0 Operational Issues

The monitoring rate (boreholes/day) continues to fall short of the project goal of 3 boreholes per day. This rate incorporates all operational aspects of monitoring, including both scheduled and unscheduled down time for maintenance, operator support, security, etc. The monitoring rate achieved during the 3rd quarter of FY 2003 remained at 1.8 boreholes per day, the same rate as the previous quarter.

A significant amount of time continues to be lost due to the lack of operator support, usually because the operators are assigned other tasks by CHG management. The down time related to lack of operator support has remained relatively constant during the past three quarters (between 107 and 149 hours per quarter, or approximately 25 percent of the total available logging time).

Tables 4-1 and 4-2 include summaries of production and operational issues, respectively, that affect monitoring production.

Table 4-1. Summary of Monitoring Production

Quarter	Total Work Days	Total Days Down	Total Boreholes Monitored	Boreholes Monitored per Day
4 th of FY02	66	27.6	144	2.2
1 st of FY03	56	34.7	72	1.3
2 nd of FY03	55	22.5	97	1.8
3 rd of FY03	58	25	105	1.8
Cumulative Total	235	109.8	418	N/A
Average/Quarter	58.8	27.5	104.5	1.8

Table 4-2. Summary of Operational Down Time

Quarter	Equipment/ Truck Problems (hrs)	No HPT/ Operator Support (hrs)	System Calibration (hrs)	No Charge Code or Administrative (hrs)	Moving Truck (hrs)	Weather (hrs)	Misc. (hrs)	Total Down Time (hrs)
4 th of FY02	81	122	0	0	37	0	8	248
1 st of FY03	71	107	0	18	18	0	98	312
2 nd of FY03	27	126	35	0	10	0	0	198
3 rd of FY03	51	149	0	0	12	0	13	225
Cumulative Total	230	504	35	18	77	0	119	983
Average/Quarter	57.5	126	8.8	4.5	19.3	0	29.8	245.8

A number of boreholes encountered during the past 2 years of monitoring are either inaccessible and/or in a configuration that makes them less than suitable for monitoring. These include boreholes that are full of water, have obstructions (broken well caps), and boreholes that are either buried or covered by surface equipment. These boreholes should either be abandoned or reworked (water pumped, broken well caps removed, or surface obstructions removed) by the well services group. Future reports will include a table of these wells and suggestions to resolve these problems.

5.0 Future Monitoring Operations

Appendix D provides a summary by tank farm of prioritized boreholes available for monitoring through the end of the 4th quarter of FY 2003. This list includes all boreholes with a total score in excess of 13 and a next monitoring date that is overdue or will become overdue within 90 days and boreholes selected for retrieval monitoring. The list likely contains more boreholes than can actually be monitored during the quarter. It also includes boreholes requiring high rate logging. These boreholes will be deferred to FY 2004 due to the lack of available HRLS capability on the existing RAS monitoring system. Also included in this list are a number of boreholes that are inaccessible for monitoring. Pending appropriate action by CHG, these boreholes will also be deferred to FY 2004.

The monitoring will continue to cycle through the farms, collecting additional data from boreholes of interest, those selected for special study, and a number of boreholes that have lower priority but have not been logged for several years. Tank farms A, AX, B, BX, BY, C, S, SX, T, TX, TY, and U may be visited during the 4th quarter of FY 2003.

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U.S. Department of Energy (DOE), 2003a. *Hanford Tank Farms Vadose Zone Monitoring Project, Annual Monitoring Report for Fiscal Year 2002*, GJO-2003-400-TAC, Grand Junction Office, Grand Junction, Colorado.

U.S. Department of Energy (DOE), 2003b. *Hanford Tank Farms Vadose Zone Monitoring Project, Baseline Monitoring Plan*, GJO-HGLP 1.8.1, Revision 0, Grand Junction Office, Grand Junction, Colorado.

U.S. Department of Energy (DOE), 2003c. *Hanford Tank Farms Vadose Zone Monitoring Project, Evaluation of Log Data in the Vicinity of Tank U-107*, GJO-2003-427-TAC, Grand Junction Office, Grand Junction, Colorado.

Appendix A
Boreholes Monitored During Third Quarter FY 2003

Appendix A. Boreholes Monitored During Third Quarter FY 2003

Borehole Number	Tank	Tank Score	Top	Bottom	Footage	Rerun Footage	Total Score	Next Log Date	HRLS	RAS Event A	RAS Event B	RAS Event C	RAS Event D	RAS Event E	RAS Event F	RAS Event G	Comment
40-03-11	S-103	14	40	80	40		14	06/03/08		06/30/03							No apparent change
40-04-07	S-104	27	35	80	45		52	06/13/04		05/31/02	06/19/03						No apparent change
40-07-01	S-107	23	35	80	45		48	06/12/04		05/31/02	06/18/03						No apparent change
40-11-09	S-111	39	40	80	40		39	06/12/04		06/05/02	06/18/03						No apparent change
50-06-18	T-106	92	25	130	110		142	09/16/03		08/01/01	01/29/02	09/03/02	12/31/02	06/18/03			Poss. Incr. 117-119 ft (Co-60), poss. ongoing 6/18/03
50-06-02	T-106	92	30	122	92	10	142	12/14/03		07/19/01	11/07/01	01/15/02	08/29/02	06/17/03			Apparent change at 110 ft not confirmed
50-06-03	T-106	92	30	118	88		142	12/14/03		07/18/01	11/12/01	01/15/02	08/28/02	06/17/03			Apparent change at 115 ft not confirmed
50-05-07	T-105	2	30	87	57		27	06/10/04		01/08/02	06/16/03						No apparent change
50-09-01	T-109	4	30	86	56		54	12/13/03		07/23/01	11/08/01	01/28/02	08/27/02	06/16/03			Apparent change at 85 ft result of water level
50-09-02	T-109	4	30	86	56		54	12/13/03		01/08/02	08/27/02	06/16/03					Apparent change 81-86 ft caused by diff. water levels
10-01-16	A-101	89	20	52	32		114	06/06/04		06/19/01	06/17/02	06/12/03					Decreasing counts
10-01-28	A-101	89	20	43	23		114	06/06/04		06/19/01	06/18/02	06/12/03					Decreasing counts
10-01-39	A-101	89	20	44	24		114	06/06/04		06/20/01	06/18/02	06/12/03					Decreasing counts
10-05-02	A-105	115	45	119	74		115	06/06/04		06/25/01	06/18/02	06/12/03					No apparent change
10-01-04	A-101	89	35	85	50	10	114	06/05/04		06/27/01	06/21/02	06/11/03					No apparent change
11-01-02	AX-101	66	40	85	45		66	06/05/04		06/17/02	06/11/03						No apparent change
11-02-12	AX-102	2	20	50	30		27	06/05/04		06/14/02	06/11/03						No apparent change
11-03-02	AX-103	7	20	90	70	10	32	06/05/04		06/13/02	06/11/03						No apparent change
11-03-09	AX-103	7	40	85	45		7	05/15/08		06/11/03							No apparent change
11-04-08	AX-104	6	40	85	45		6	05/15/08		06/11/03							No apparent change
10-01-01	A-101	89	45	85	40		89	06/04/04		06/27/01	06/21/02	06/10/03					No apparent change
10-01-03	A-101	89	45	78	33		89	06/04/04		06/27/01	06/21/02	06/10/03					No apparent change
10-05-05	A-105	115	45	74	29		115	06/04/04		06/25/01	06/20/02	06/10/03					No apparent change
10-05-07	A-105	115	45	75	30		115	06/04/04		06/26/01	06/20/02	06/10/03					No apparent change
10-05-08	A-105	115	45	55	10	10	115	06/04/04		06/26/01	06/20/02	06/10/03					No apparent change
10-05-09	A-105	115	45	76	31		115	06/04/04		06/26/01	07/01/02	06/10/03					No apparent change
10-05-12	A-105	115	45	75	30		115	06/04/04		06/26/01	06/20/02	06/10/03					No apparent change
10-06-02	A-106	3	45	85	40	10	3	05/14/08		06/10/03							No apparent change
10-04-10	A-104	2	45	85	40	10	2	05/13/08		06/09/03							No apparent change
10-05-10	A-105	115	25	100	75		140	06/03/04		06/26/01	06/20/02	06/09/03					No apparent change
51-07-07	TX-107	4	40	90	60	10	29	05/29/04		05/20/02	06/04/03						No apparent change
51-07-18	TX-107	4	40	80	50		29	05/29/04		05/16/02	06/04/03						No apparent change
51-01-02	TX-101	2	40	80	40		40	05/28/04		05/13/02	06/03/03						No apparent change
51-03-01	TX-103	5	40	80	40		30	05/28/04		05/13/02	06/03/03						No apparent change
51-05-01	TX-105	14	40	80	40		39	05/28/04		05/15/02	06/03/03						No apparent change
51-05-03	TX-105	14	25	90	65		51	05/28/04		05/13/02	06/03/03						No apparent change
51-03-12	TX-103	5	40	99	59		30	05/24/04		05/14/02	05/30/03						No apparent change
51-04-02	TX-104	4	40	90	50	10	41	05/24/04		05/17/02	05/30/03						No apparent change
51-04-06	TX-104	4	40	90	50		41	05/24/04		05/16/02	05/30/03						No apparent change
52-03-03	TY-103	6	40	80	41		31	05/23/04	05/13/02	05/14/02	05/29/03						No apparent change
52-05-07	TY-105	32	40	96	56	10	82	11/24/03		05/02/02	12/04/02	05/28/03					No apparent change
52-06-04	TY-106	16	40	97	57		54	05/22/04		05/07/02	05/28/03						No apparent change
52-06-06	TY-106	16	40	99	59	10	54	05/22/04		05/07/02	05/28/03						No apparent change
52-03-12	TY-103	6	40	99	59		31	05/21/04		05/02/02	05/27/03						No apparent change
52-06-05	TY-106	16	40	147	107		66	08/25/03		05/08/02	12/04/02	05/27/03					Possible change 130-148 ft, ongoing 12/04/03, 5/27/03
52-03-06	TY-103	6	40	100	60		56	08/20/03		05/02/02	05/21/02	08/22/02	12/04/02	05/22/03			Definite change 55-60 ft; report issued 5/14/02
52-06-07	TY-106	16	200	238	38		41	05/16/04		05/07/02	05/22/03						Co-60 may be in GW, Radon on 5/22/03
50-00-09	T-106	92	30	120	90		142	11/17/03		07/18/01	01/09/02	08/28/02	05/21/03				No apparent change
50-08-07	T-108	2	30	119	89		27	05/14/04		01/10/02	05/20/03						No apparent change
50-09-10	T-109	4	30	119	89	10	54	11/16/03		07/23/01	11/07/01	01/16/02	08/28/02	05/20/03			Apparent change at 76 and 94 ft not confirmed
50-02-05	T-102	5	30	83	53	10	55	11/15/03		07/25/01	01/22/02	08/28/02	05/19/03				Apparent Cs-137 increase (39-41ft)
50-01-09	T-101	11	30	90	60		61	11/11/03		07/30/01	11/08/01	01/22/02	08/28/02	05/15/03			Apparent change at 86-90 ft not confirmed
50-04-08	T-104	5	30	95	65		55	11/11/03		07/31/01	01/24/02	08/28/02	05/15/03				No apparent change

Appendix A. Boreholes Monitored During Third Quarter FY 2003

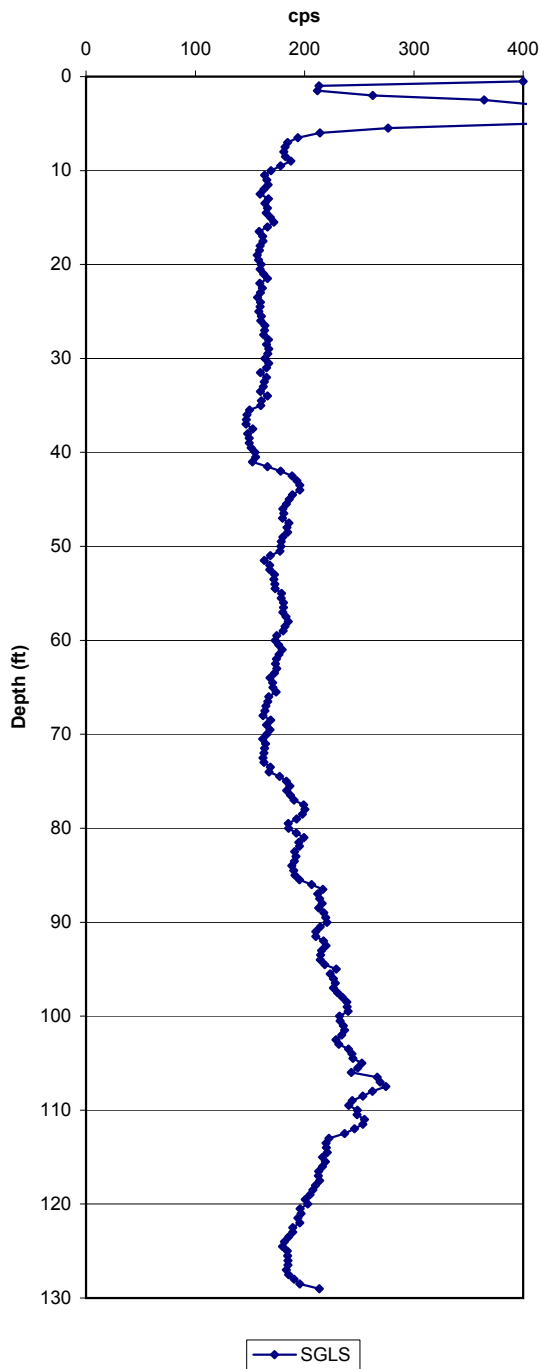
Borehole Number	Tank	Tank Score	Top	Bottom	Footage	Rerun Footage	Total Score	Next Log Date	HRLS	RAS Event A	RAS Event B	RAS Event C	RAS Event D	RAS Event E	RAS Event F	RAS Event G	Comment
50-04-10	T-104	5	30	87	57		55	08/13/03		07/31/01	01/22/02	08/29/02	12/16/02	05/15/03			Apparent change 67-68 ft
50-08-08	T-108	2	30	95	65	10	27	05/08/04		01/08/02	05/14/03						No apparent change
50-08-19	T-108	2	30	86	56		27	05/08/04		01/08/02	05/14/03						No apparent change
30-01-09	C-101	18	20	70	55		43	05/01/04		04/25/02	05/07/03						No apparent change
30-05-07	C-105	3	30	48	11		28	05/01/04		04/25/02	05/07/03						No apparent change; requires HRLS
30-01-06	C-101	18	30	70	40		43	04/30/04		04/18/02	05/06/03						No apparent change
30-03-09	C-103	26	30	98	68		51	04/30/04		04/19/02	05/06/03						No apparent change
30-04-08	C-104	9	30	80	50	10	9	04/08/08		05/05/03							No apparent change
30-08-02	C-108	2	30	99	69		27	08/03/03		09/11/02	09/12/02	01/21/03	05/05/03				Definite change in Co-60 49-75 ft, downward movement
30-08-03	C-108	2	30	50	20		2	08/03/03		01/21/03	05/05/03						No apparent change
30-09-06	C-109	2	30	98	68		40	08/03/03		04/23/02	01/29/03	05/05/03					No apparent change
30-09-07	C-109	2	30	121	91	10	27	07/31/03		09/11/02	01/16/03	05/02/03					No apparent change
30-11-01	C-111	7	30	70	40		7	04/05/08		05/02/03							No apparent change
30-11-05	C-111	7	30	70	40		7	04/05/08		05/02/03							No apparent change
30-11-11	C-111	7	30	70	40		7	04/05/08		05/02/03							No apparent change
30-05-03	C-105	3	30	90	60		28	04/25/04		04/19/02	05/01/03						No apparent change
30-05-04	C-105	3	30	117	87		28	04/25/04		04/22/02	05/01/03						No apparent change
30-05-05	C-105	3	30	98	68	10	28	04/25/04		04/17/02	05/01/03						No apparent change
30-05-08	C-105	3	25	48	23		28	04/25/04		04/22/02	05/01/03						No apparent change
30-07-01	C-107	9	30	80	50		9	04/03/08		04/30/03							No apparent change
30-07-02	C-107	9	30	70	40		9	04/03/08		04/30/03							No apparent change
30-07-05	C-107	9	30	80	50		9	04/03/08		04/30/03							No apparent change
30-07-08	C-107	9	30	70	40	10	9	04/03/08		04/30/03							No apparent change
30-05-02	C-105	3	5	127	122		28	04/23/04		04/22/02	01/29/03	04/29/03					No apparent change, C-106 Retrieval
30-06-04	C-106	6	0	129	129		31	04/23/04		09/11/02	01/27/03	04/29/03					No apparent change, C-106 Retrieval
30-06-12	C-106	6	0	99	99	10	44	07/28/03		04/24/02	01/24/03	04/29/03					No apparent change, C-106 Retrieval
30-00-01	C-106	6	0	61	61	10	31	04/22/04		04/24/02	01/16/03	04/28/03					No apparent change, C-106 Retrieval
30-06-02	C-106	6	0	122	122		6	04/22/04		01/27/03	04/28/03						No apparent change, C-106 Retrieval
30-06-03	C-106	6	0	82	82	10	6	04/22/04		01/23/03	04/28/03						No apparent change, C-106 Retrieval
30-06-09	C-106	6	5	98	93		44	04/16/04		04/22/02	01/22/03	04/22/03					No apparent change, C-106 Retrieval
30-06-10	C-106	6	0	128	128		56	07/21/03		04/23/02	01/23/03	04/22/03					Pos. change 124-126 ft Co-60, 5 ft Cs-137, C-106 Retrieval
20-06-03	B-106	3	35	75	40		28	04/15/04		05/28/02	04/21/03						No apparent change
20-07-02	B-107	13	35	100	70		38	04/15/04		05/22/02	04/21/03						No apparent change
20-07-11	B-107	13	35	90	55		38	04/15/04		05/23/02	04/21/03						No apparent change; possible Sr-90 at 72 ft
20-00-05	B-101	12	35	110	75		37	04/08/04		05/29/02	04/14/03						No apparent change
20-01-01	B-101	12	35	75	40		37	04/08/04		05/28/02	04/14/03						No apparent change
20-01-06	B-101	12	25	59	34	10	37	04/02/04		05/29/02	04/08/03						No apparent change
20-10-02	B-110	12	20	97	77	10	37	04/02/04		05/30/02	04/08/03						No apparent change; possible Sr-90 at 75 ft
20-10-07	B-110	12	35	75	40		37	04/02/04		05/29/02	04/08/03						No apparent change
22-00-02	BY-103	13	40	98	58	10	63	10/04/03		11/15/01	07/25/02	04/07/03					No apparent change
22-03-04	BY-103	13	40	100	60		63	10/04/03		11/15/01	07/23/02	04/07/03					Possible change 77-82 ft not confirmed
22-06-05	BY-106	26	20	97	77		76	10/04/03		11/27/01	07/26/02	04/07/03					No apparent change
22-08-02	BY-108	24	25	102	77		74	10/01/03		12/13/01	07/30/02	04/04/03					No apparent change
22-08-05	BY-108	24	35	98	63		74	10/01/03		12/17/01	07/30/02	11/20/02	04/04/03				Apparent change 75-82 ft not confirmed
22-08-12	BY-108	24	30	100	70	10	74	10/01/03		12/13/01	08/19/02	04/04/03					No apparent change
22-07-02	BY-107	18	30	100	70		68	09/30/03		11/29/01	07/29/02	04/03/03					Apparent change 98-100 ft not confirmed
22-07-05	BY-107	18	30	97	67	10	68	09/30/03		12/12/01	07/29/02	04/03/03					Apparent change 75-81 ft not confirmed
22-07-07	BY-107	18	40	99	59		68	09/30/03		12/12/01	08/20/02	04/03/03					No apparent change
22-10-07	BY-110	3	40	90	50		53	09/30/03		12/11/01	07/18/02	04/03/03					No apparent change
21-11-03	BX-111	7	35	98	68	10	32	03/27/04		03/25/02	04/02/03						No apparent change
21-11-04	BX-111	7	35	90	60		32	03/27/04		03/21/02	04/02/03						No apparent change
21-06-05	BX-106	1	25	80	60		26	03/26/04		03/25/02	04/01/03						No apparent change

Appendix B
Comparison of the Current RAS and
the SGLS Baseline Measurements

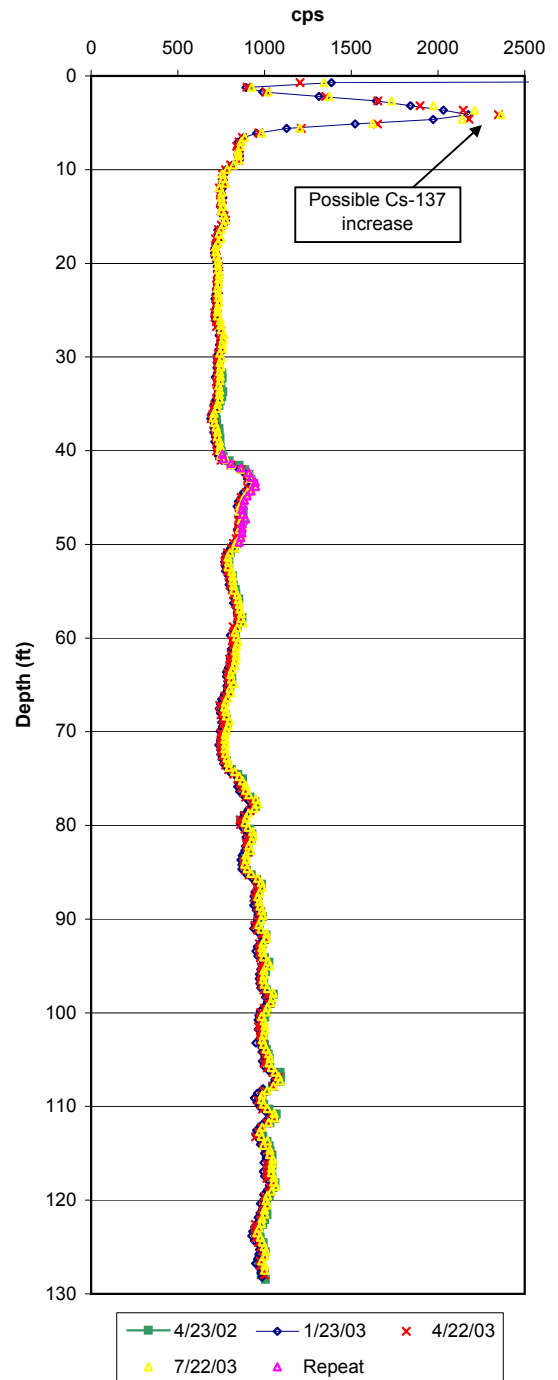


Borehole 30-06-10

SGLS Total Gamma
Log Date: 1/29/97

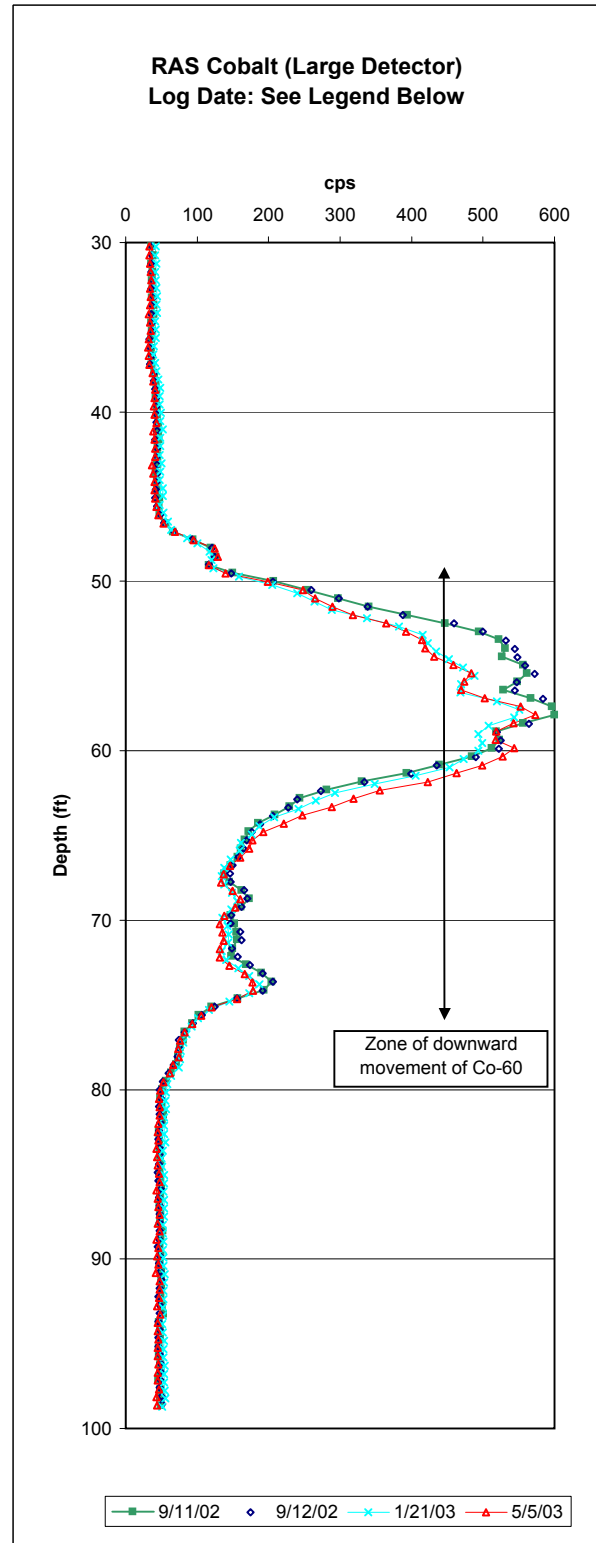
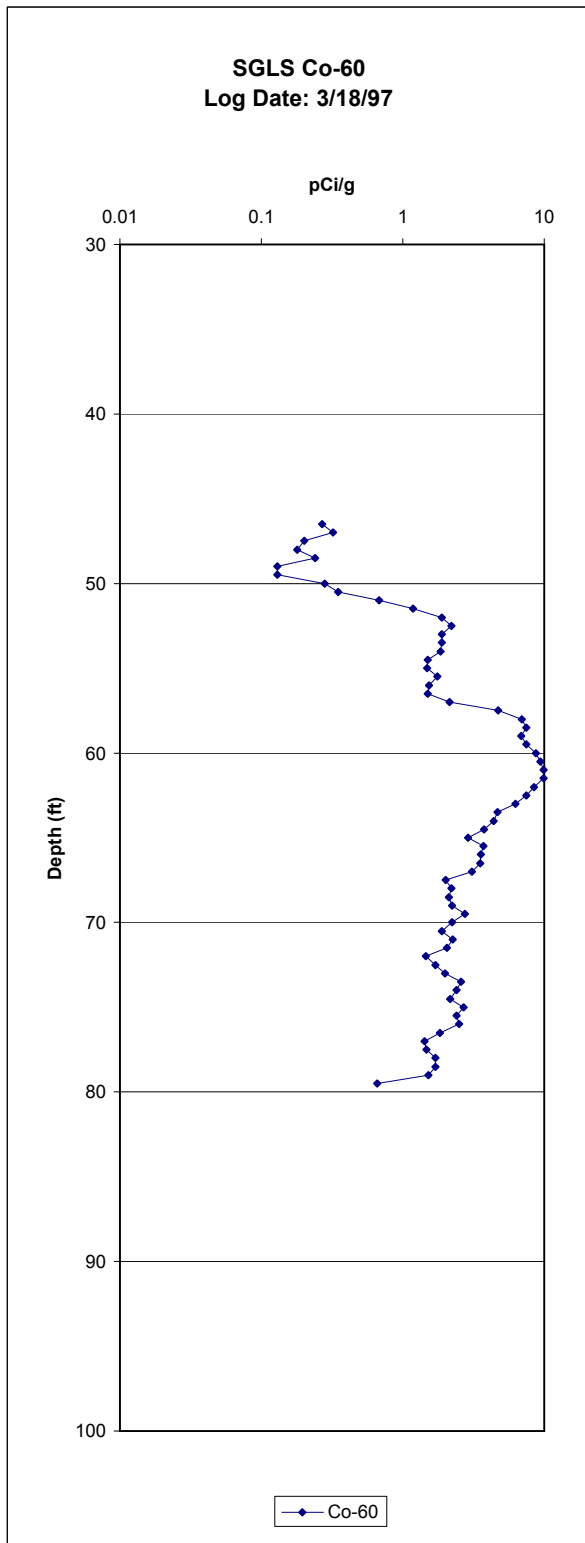


RAS Total Gamma (Large Detector)
Log Date: See Legend Below





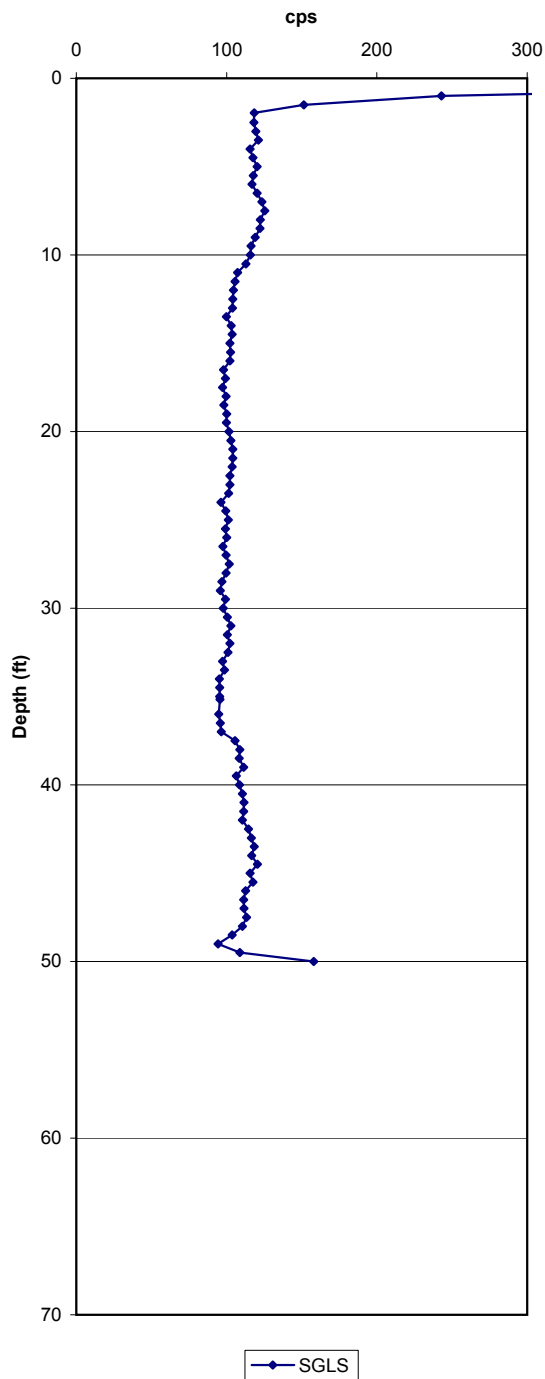
Borehole 30-08-02



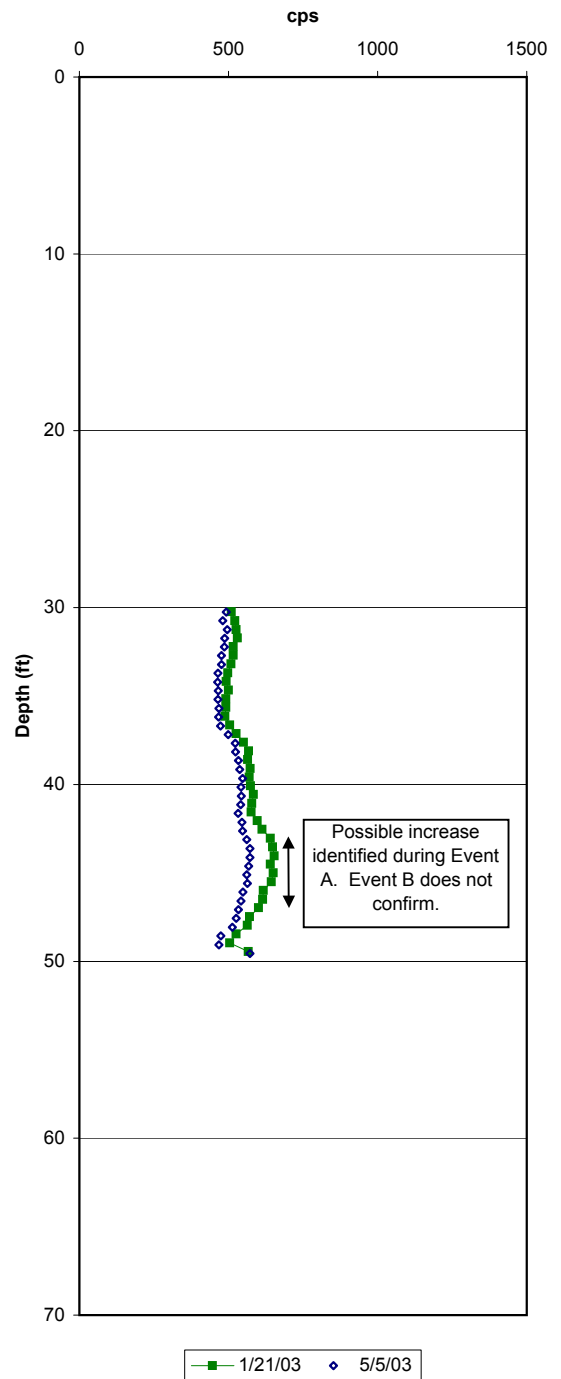


Borehole 30-08-03

SGLS Total Gamma
Log Date: 3/20/97



RAS Total Gamma (Large Detector)
Log Date: See Legend Below



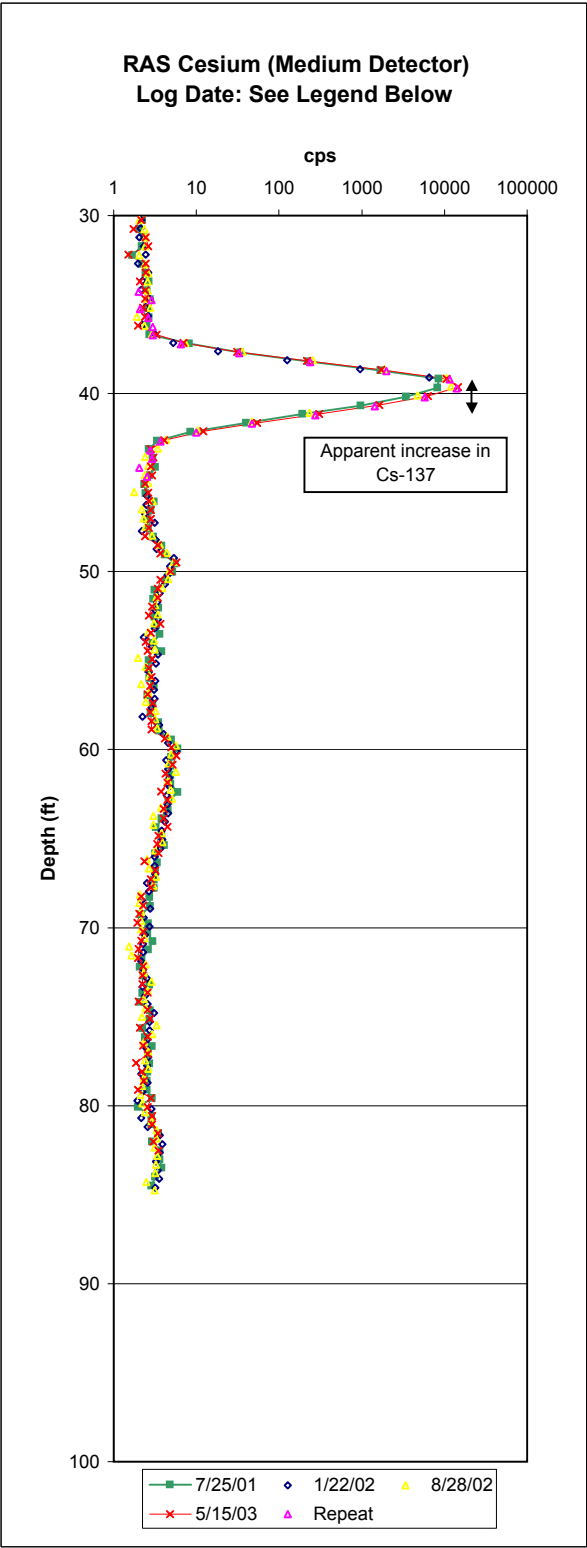
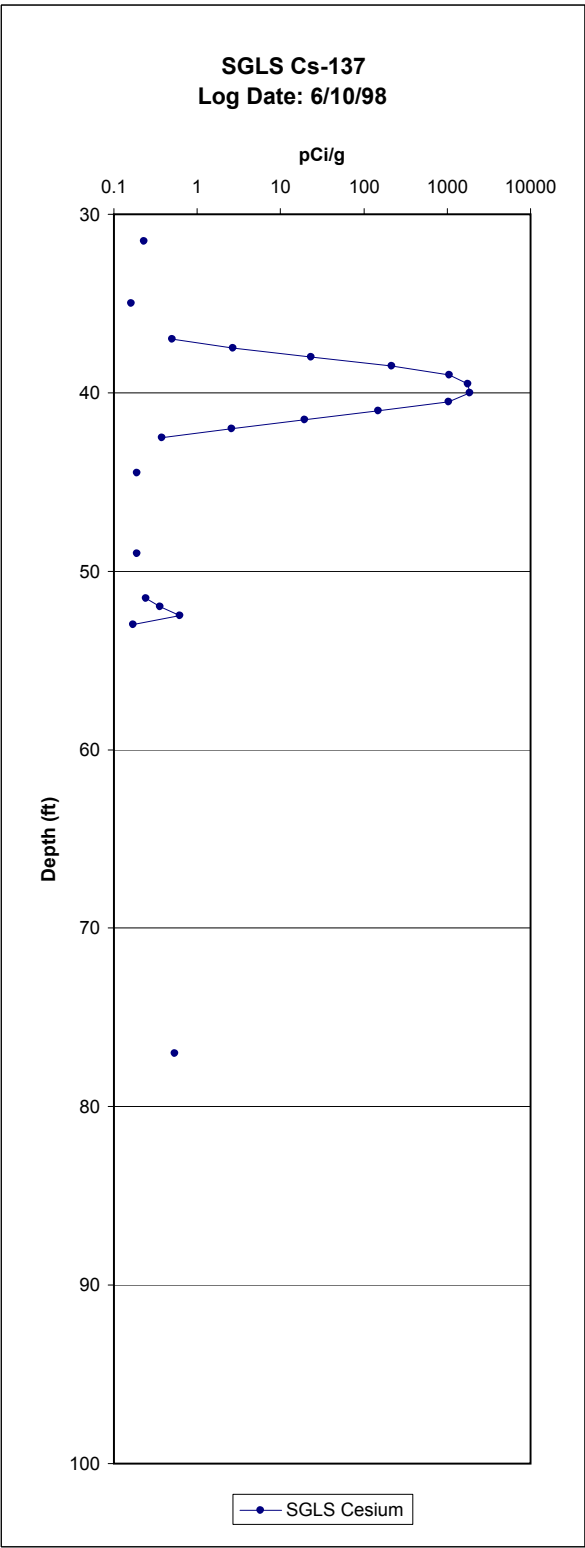
Borehole Information

Coordinates (HAN Plant):	North: 43596	West: 75723	Elevation (ft): 672.34
Coordinates (WA Plane):	North: 136749.494	East: 566811.727	Elevation (m): 205.963
Drill Date: 3/31/1974	Type: Cable Tool	Depth (ft): 85.5	Depth Datum: TOC
Depth/Water (ft): Dry	D/W Date: 5/14/03	D/W Reference: Stoller	
Comments: There is grout between the 6" and 4" casings.			

Type	Top(ft)	Bottom (ft)	ID (in)	Thick. (in)	Stickup (ft)	Reference
Steel	0	91	6	0.28	0	Stoller
Steel	0	91	4	0.237	0	Stoller

[illegible]

Borehole 50-02-05



Borehole Number (Alias): 50-06-18 (299-W10-196) (Unknown)

Borehole Information

Site: T Farm, Tank T-106

Coordinates (HAN Plant):	North: 43517	West: 75802	Elevation (ft): 673.51
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Coordinates (WA Plane):	North: Unk	East: Unk	Elevation (m): Unk
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Drill Date: 4/13/1993	Type: Cable Tool	Depth (ft): 179.6	Depth Datum: TOC
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Depth/Water (ft): Dry	D/W Date: 10/15/02	D/W Reference: Stoller
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Comments: There are three casing strings in this borehole. There is bentonite between the casing strings.

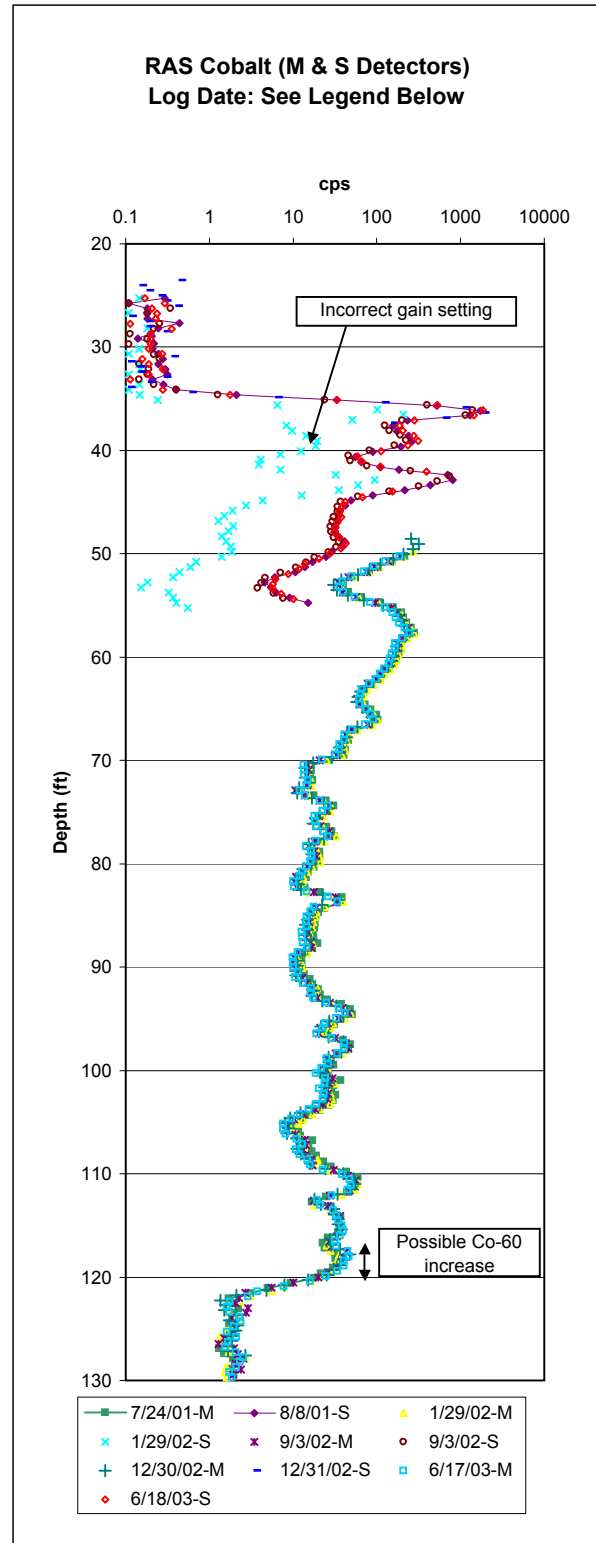
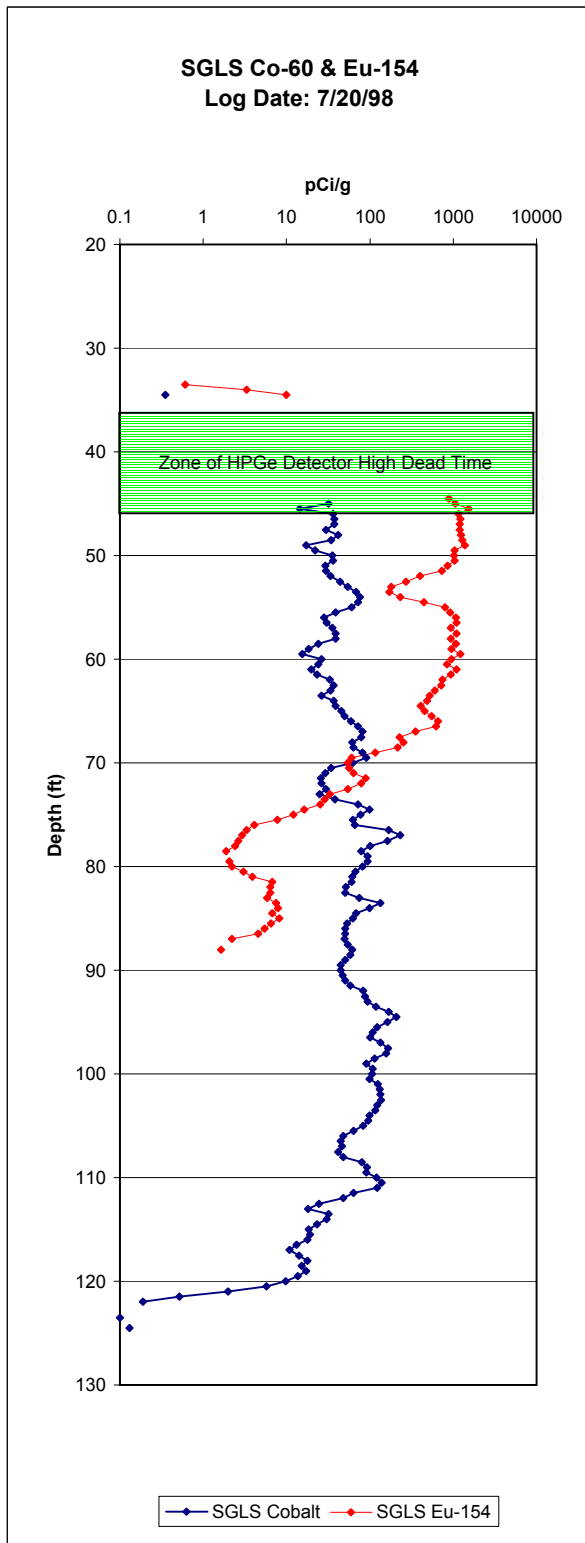
Casing Information

Type	Top(ft)	Bottom (ft)	ID (in)	Thick. (in)	Stickup (ft)	Reference
Steel	0	73	10	0.365	1.6	Stoller
Steel	0	114	8	0.322	1.6	Stoller
Steel	0	176	6	0.28	1.6	Stoller

Log Run Information

Log Date	System	Detector	Event	Log int. (ft)	Contractor	Comments
11/17/1992	RLS-1	18%	NA	0-8	WHC	During Drilling.
1/7/1993	RLS-1	18%	NA	7-69	WHC	During Drilling.
2/2/1993	RLS-1	18%	NA	65-73	WHC	During Drilling.
2/17/1993	RLS-1	18%	NA	60-97	WHC	During Drilling.
2/26/1993	RLS-1	18%	NA	95-122	WHC	During Drilling.
3/18/1993	RLS-1	18%	NA	120-148	WHC	During Drilling.
4/14/1993	RLS-1	18%	NA	146-176	WHC	During Drilling.
2/3/1994	RLS-1	18%	NA	0-98	WHC	Completed Borehole
2/4/1994	RLS-1	18%	NA	97-176.5	WHC	Completed Borehole
7/20/1998	SGLS	G2B	NA	0-175.5	MACTEC-ERS	Baseline
4/14/1999	SGLS	G2B	NA	45-130	MACTEC-ERS	Baseline Repeat
8/12/1999	HRLS	G1C	NA	35-46	MACTEC-ERS	Baseline Highrate
7/24/2001	RAS	S & M	A	25-130	MACTEC-ERS	Possible Increase 117-119
1/29/2002	RAS	S & M	B	25-130	MACTEC-ERS	Possible Increase 117-119
9/3/2002	RAS	S & M	C	25-130	Stoller	Possible Increase 117-119
10/15/2002	NMLS	G2F	NA	109.75-176.25	Stoller	Moisture
12/30/2002	RAS	Medium	D	50-130	Stoller	Possible Increase 117-119
12/31/2002	RAS	Small	D	25-40	Stoller	No change from above
6/17/2003	RAS	Medium	E	50-130	Stoller	Possible Increase 117-119
6/18/2003	RAS	Small	E	25-55	Stoller	No change from above

Borehole 50-06-18





Borehole Information

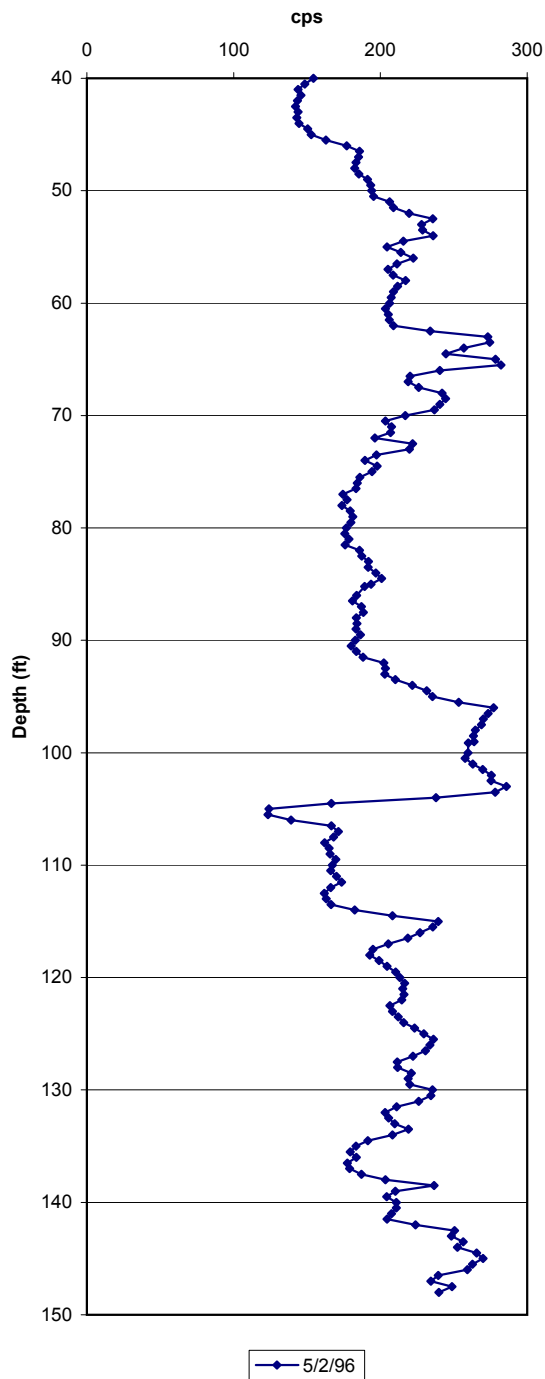
Coordinates (HAN Plant):	North: 42358	West: 75912	Elevation (ft): 672.80
Coordinates (WA Plane):	North: 136371.464	East: 566754.794	Elevation (m): 205.625
Drill Date: 8/31/1952	Type: Cable Tool	Depth (ft): 148	Depth Datum: TOC
Depth/Water (ft): Dry	D/W Date: 5/14/03	D/W Reference: Stoller	
Comments: This borehole was perforated from 40 to 100 ft.			

Type	Top(ft)	Bottom (ft)	ID (in)	Thick. (in)	Stickup (ft)	Reference
Steel	0	148	8	0.31	0	Stoller

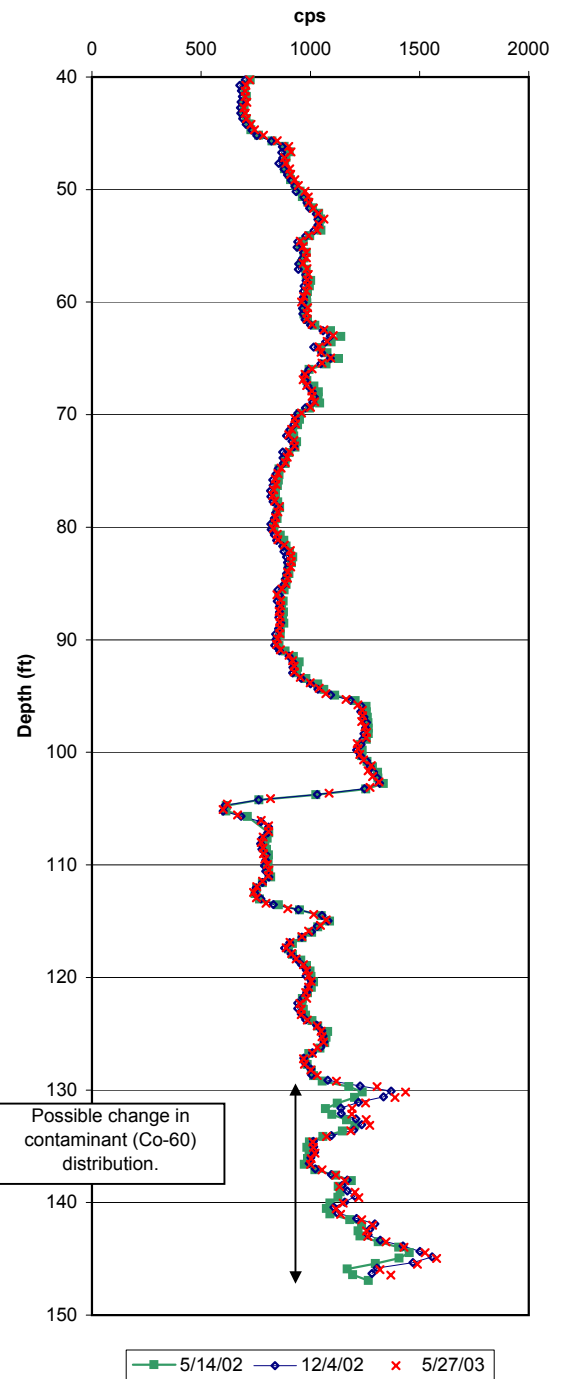
[illegible]

Borehole 52-06-05

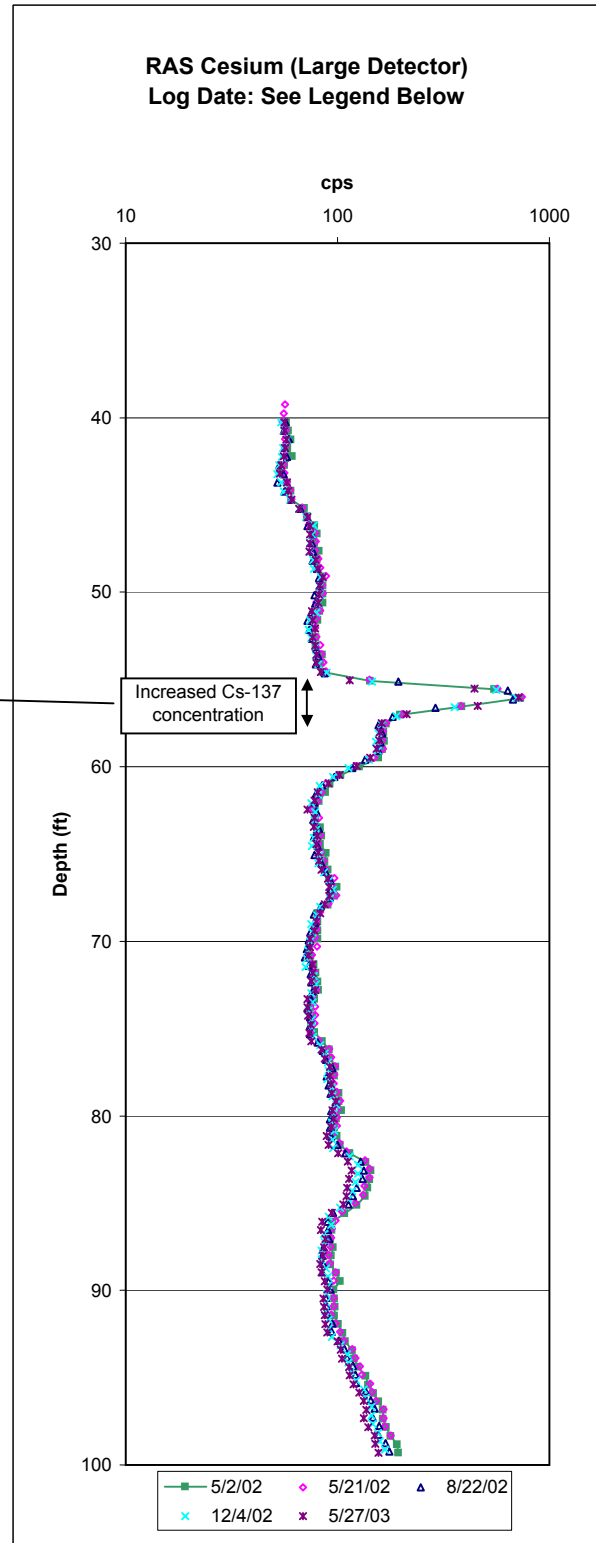
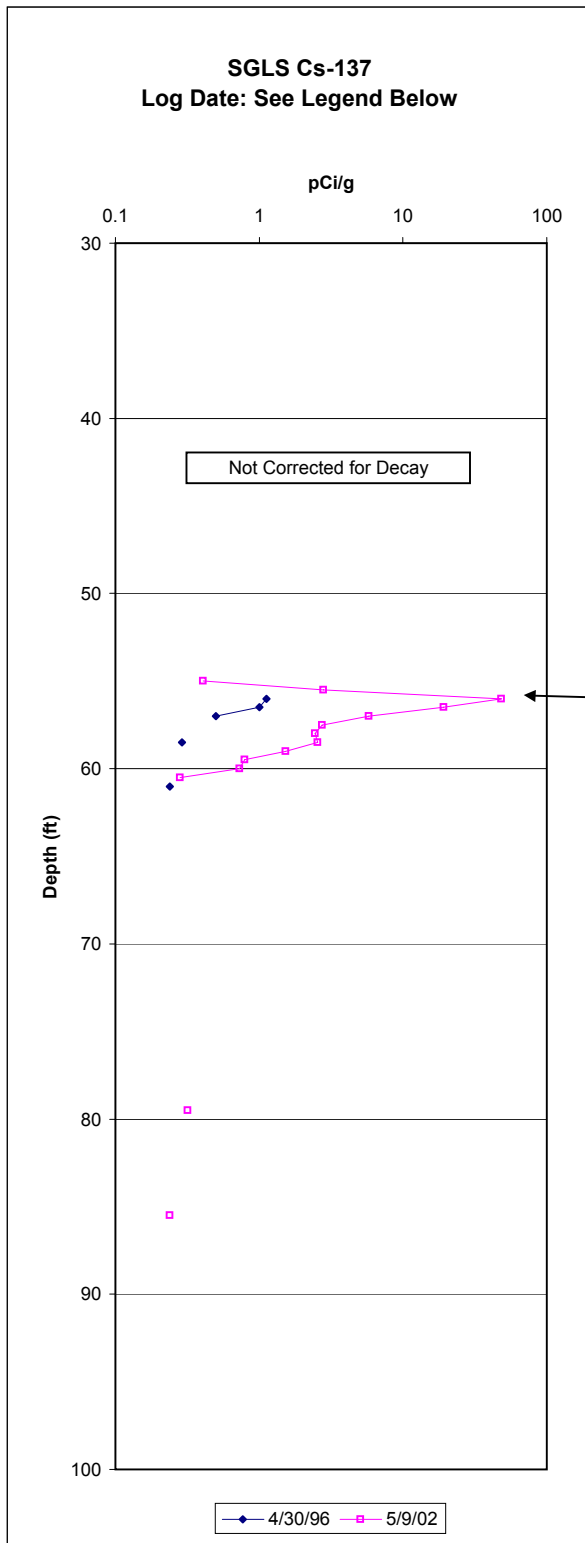
SGLS Total Gamma
Log Date: 5/2/96



RAS Total Gamma (Large Detector)
Log Date: See Legend Below

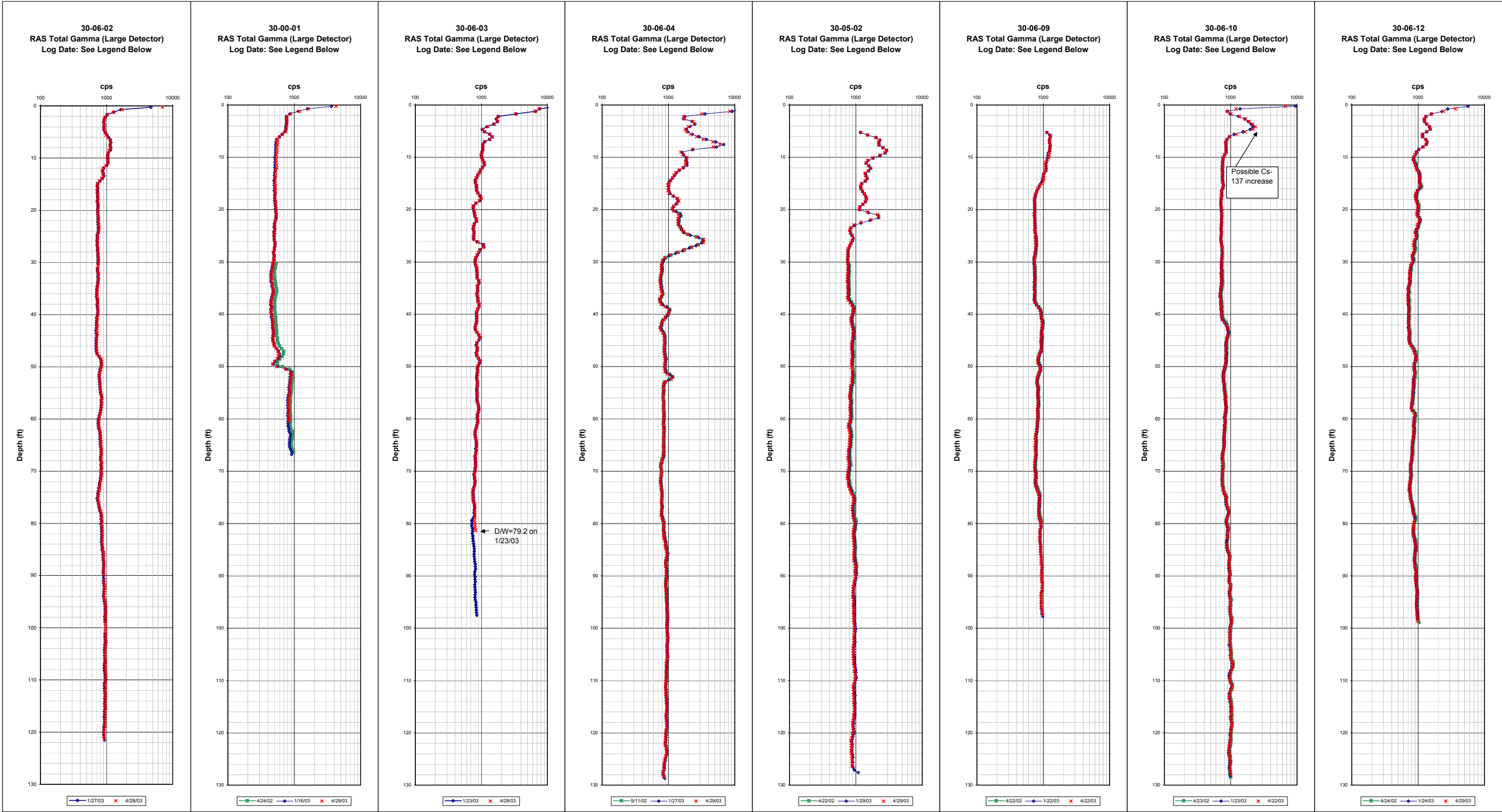


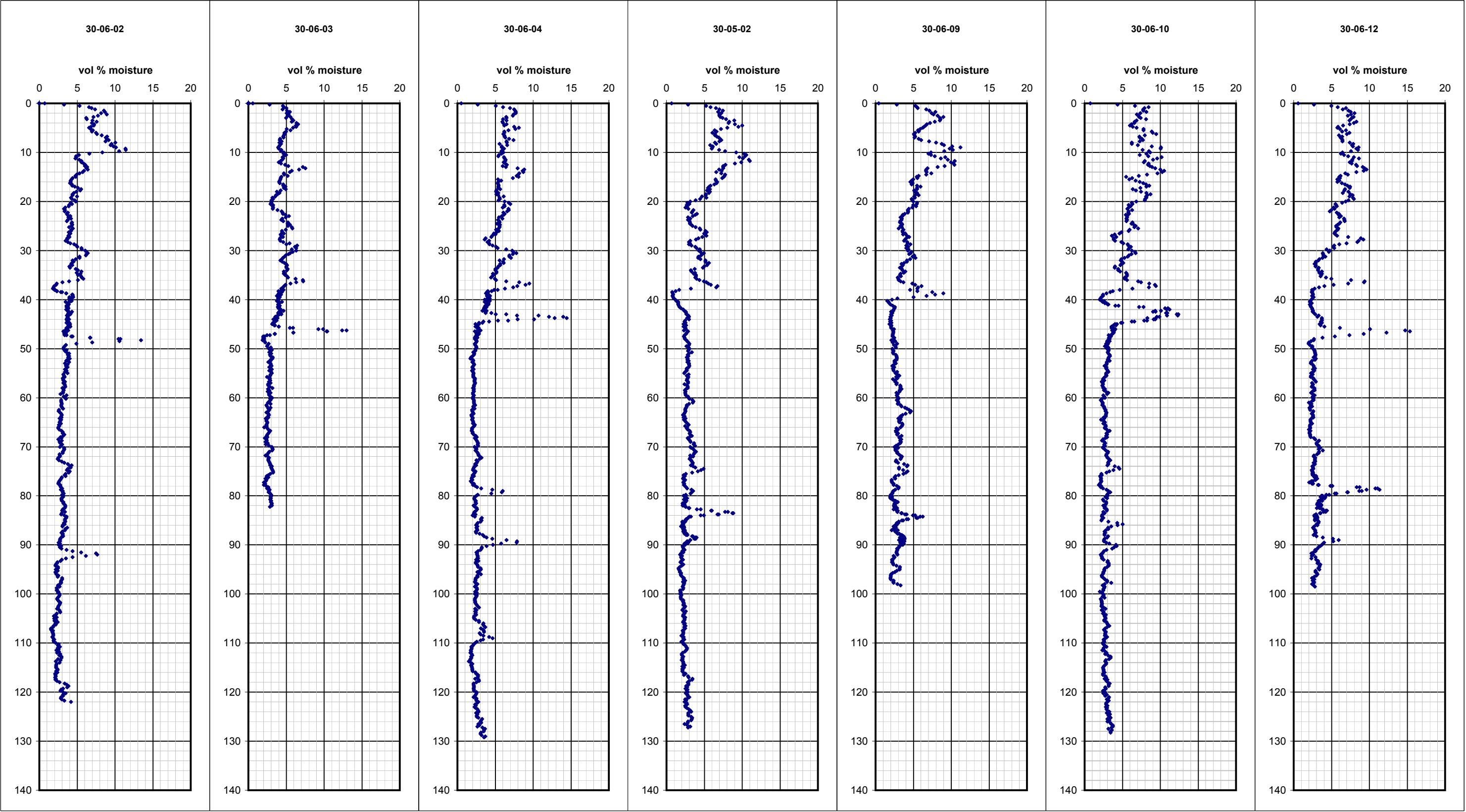
Borehole 52-03-06



Appendix C
Log Plots for C Farm
Moisture Logging and RAS Monitoring

RAS Total Gamma Logs for Boreholes Around Tank C-106





Appendix D
Boreholes Projected for Monitoring
During the Fourth Quarter of FY 2003

Appendix D. Boreholes Projected for Monitoring During the 4th Quarter of FY 2003

Borehole Number	Tank	Top	Bottom	Footage	Total Score	Next Log Date	HRLS	RAS Event A	RAS Event B	RAS Event C	RAS Event D	RAS Event E	RAS Event F	RAS Event G	Comment
10-03-04	A-103	45	90	45	18	09/18/01									BE - Cs-137
10-03-05	A-103	45	125	80	18	09/28/01									BE - Cs-137
10-03-10	A-103	45	85	40	18	10/04/01									Pipeline @ 5'
10-03-11	A-103	45	88	43	18	09/01/01									BE - Cs-137
11-01-09	AX-101	45	85	40	66	09/21/03		09/26/02							No apparent change
11-02-11	AX-102	45	85	40	15	08/09/01									Co-60 @ 75'
20-02-09	B-105	35	99	64	34	09/18/03		09/23/02							No apparent change
20-03-06	B-103	35	75	40	34	09/18/03		09/23/02							No apparent change
20-05-06	B-105	35	120	86	34	09/20/03		09/25/02							No apparent change
20-06-06	B-106	35	100	69	28	09/19/03		09/24/02							No apparent change
20-08-02	B-108	35	105	70	31	09/18/03		09/23/02							No apparent change
20-08-07	B-108	35	80	45	31	09/14/03		09/19/02							No apparent change
20-09-06	B-109	35	101	66	32	09/18/03		09/23/02							No apparent change
20-10-12	B-110	102	120	18	37	09/14/03	07/03/02	09/19/02							No apparent change
20-11-09	B-111	35	75	40	35	09/20/03		09/25/02							No apparent change
20-12-03	B-109	35	99	64	32	09/20/03		09/25/02							No apparent change
20-12-06	B-111	35	75	40	35	09/18/03		09/23/02							No apparent change
21-00-02	BX-102	35	97	62	81	08/30/03		08/13/01	09/04/02						No apparent change
21-00-07	BX-110	35	75	40	17	07/06/02									BE - Cs-137
21-02-03	BX-102	35	99	64	106	09/16/03		08/14/01	03/13/02	09/04/02	03/20/03				No apparent change
21-02-04	BX-102	0	230	0	94	06/22/03	06/27/02	09/04/01							No apparent change; HRLS 6/27/02
21-02-06	BX-102	35	99	64	94	08/30/03		08/15/01	09/04/02						No apparent change
21-03-03	BX-103	35	90	55	55	09/17/03		08/28/01	02/25/02	09/04/02	03/21/03				No apparent change
21-04-08	BX-107	35	100	65	36	08/31/03		08/29/01	09/05/02						No apparent change
21-07-03	BX-107	35	100	65	36	08/31/03		08/29/01	09/05/02						No apparent change
21-07-06	BX-107	20	102	0	36	05/15/03	05/20/02	09/05/01							No apparent change
21-08-12	BX-109	35	80	45	33	08/31/03		08/29/01	09/05/02						No apparent change
21-10-01	BX-110	35	75	40	42	08/31/03		08/30/01	09/05/02						No apparent change
21-10-03	BX-110	0	100	0	42	05/16/03	05/21/02	08/30/01							No apparent change
21-10-05	BX-110	46.5	98	57	42	09/03/03		09/06/01	09/08/02						No apparent change; requires HRLS
21-10-07	BX-110	35	75	40	17	07/05/02									
21-10-11	BX-110	35	75	40	17	07/04/02									
21-12-02	BX-109	35	75	40	33	08/30/03		08/29/01	09/04/02						No apparent change
21-27-01	BX-102	35	98	63	106	09/16/03		08/28/01	03/13/02	09/04/02	03/20/03				No apparent change
21-27-02	BX-102	35	96	61	94	08/30/03		08/20/01	09/04/02						No apparent change
21-27-07	BX-102	35	139	104	94	08/30/03		08/15/01	09/04/02						No apparent change
21-27-08	BX-102	35	148	113	106	09/22/03		08/14/01	03/13/02	09/04/02	03/26/03				Apparent change 137.5-148.5 ft not confirmed
21-27-09	BX-102	35	149	114	94	08/30/03		08/16/01	09/04/02						No apparent change
21-27-10	BX-102	30	149	119	94	08/30/03		08/13/01	09/04/02						No apparent change
21-27-11	BX-102	30	136	106	106	09/17/03		08/20/01	03/14/02	09/04/02	03/21/03				No apparent change
22-00-04	BY-102	40	99	59	31	07/18/03		07/23/02							No apparent change
22-01-04	BY-101	20	90	70	29	07/17/03		07/22/02							No apparent change
22-02-01	BY-102	40	98	58	31	07/18/03		07/23/02							No apparent change
22-02-07	BY-102	170	260	90	31	03/30/00									Sampling equip. in well. Not logged 07-02
22-02-09	BY-102	20	80	60	31	08/15/03		08/20/02							No apparent change
22-03-05	BY-103	20	99	83	50	07/11/03	07/16/02	12/20/01							No apparent change
22-04-07	BY-104	40	100	60	31	08/14/03		08/19/02							No apparent change
22-04-09	BY-104	40	125	85	31	08/07/03		08/12/02							No apparent change
22-04-11	BY-104	30	100	70	19	06/26/03		07/01/02							No apparent change

Appendix D. Boreholes Projected for Monitoring During the 4th Quarter of FY 2003

Borehole Number	Tank	Top	Bottom	Footage	Total Score	Next Log Date	HRLS	RAS Event A	RAS Event B	RAS Event C	RAS Event D	RAS Event E	RAS Event F	RAS Event G	Comment
22-09-07	BY-109	20	90	70	30	08/02/03		08/07/02							No apparent change
22-09-08	BY-109	20	97	80	30	08/16/03		08/21/02							No apparent change
22-09-11	BY-109	20	80	60	30	08/08/03		08/13/02							No apparent change
22-10-10	BY-110	40	98	58	28	08/08/03		08/13/02							No apparent change
22-11-05	BY-111	40	80	40	15	08/13/00									BE - Cs-137
22-11-09	BY-111	25	80	55	27	08/01/03		08/06/02							No apparent change
30-00-01	C-106	0	61	61	31	04/22/04		04/24/02	01/16/03	04/28/03					No apparent change, C-106 Retrieval
30-03-01	C-103	30	125	95	51	04/12/98									Cannot log because of stairwell; 10/01 and 09/02
30-03-03	C-103	30	98	68	51	04/06/98									Water in borehole 10/01 - Cannot log
30-04-12	C-104	30	70	40	21	01/30/02									BE - Cs-137
30-05-10	C-105	10	70	60	28	09/06/03		09/11/02							No apparent change
30-06-02	C-106	0	122	122	6	04/22/04		01/27/03	04/28/03						No apparent change, C-106 Retrieval
30-06-03	C-106	0	82	82	6	04/22/04		01/23/03	04/28/03						No apparent change, C-106 Retrieval
30-06-04	C-106	0	129	129	31	04/23/04		09/11/02	01/27/03	04/29/03					No apparent change, C-106 Retrieval
30-06-09	C-106	5	98	93	44	04/16/04		04/22/02	01/22/03	04/22/03					No apparent change, C-106 Retrieval
30-06-10	C-106	0	128	128	56	07/21/03		04/23/02	01/23/03	04/22/03					Pos. change 124-126 ft Co-60, 5 ft Cs-137, C-106 Retrieval
30-06-12	C-106	0	99	99	44	07/28/03		04/24/02	01/24/03	04/29/03					No apparent change, C-106 Retrieval
30-08-02	C-108	30	99	69	27	08/03/03		09/11/02	09/12/02	01/21/03	05/05/03				Definite change in Co-60 49-75 ft, downward movement
30-09-01	C-109	30	99	69	27	09/06/03		09/11/02							No apparent change
30-09-02	C-109	30	100	70	27	09/06/03		09/11/02							No apparent change
30-09-06	C-109	30	98	68	40	08/03/03		04/23/02	01/29/03	05/05/03					No apparent change
30-09-07	C-109	30	121	91	27	07/31/03		09/11/02	01/16/03	05/02/03					No apparent change
30-09-10	C-109	25	98	73	27	09/06/03		09/11/02							No apparent change
30-09-11	C-109	30	99	69	27	09/06/03		09/11/02							No apparent change
30-12-01	C-112	30	70	40	27	09/05/03		09/10/02							No apparent change
30-12-13	C-112	25	70	45	27	09/05/03		09/10/02							No apparent change
40-02-01	S-102	40	80	40	14	08/22/07		09/17/02							No apparent change, S-102 Retrieval
40-02-03	S-102	20	80	0	39	04/20/03	04/25/02								HRLS 04/25/02; no apparent change, S-102 Retrieval
40-02-05	S-102	40	80	40	14	08/22/07		09/17/02							No apparent change, S-102 Retrieval
40-02-07	S-102	20	80	60	39	09/12/03		09/17/02							No apparent change, S-102 Retrieval
40-02-08	S-102	20	85	65	39	09/12/03		09/17/02							No apparent change, S-102 Retrieval
40-02-10	S-102	40	80	40	14	08/22/07		09/17/02							No apparent change, S-102 Retrieval
40-03-01	S-103	40	80	40	14	05/25/01									
40-03-05	S-103	40	90	50	39	09/12/03		09/17/02							No apparent change
40-03-06	S-103	40	80	40	14	05/15/01									
40-03-08	S-103	40	80	40	14	05/19/01									
40-03-09	S-103	20	80	60	14	05/22/01									Borehole Obstruction at 18 ft.
40-04-05	S-104	35	100	82	52	06/06/03	04/24/02	06/11/02							No apparent change
40-04-08	S-104	20	50	30	52	05/19/97									Borehole is covered by transfer line
40-07-08	S-107	40	80	40	23	05/24/97									Borehole is covered by transfer line
40-07-10	S-107	40	80	40	23	05/02/01									Borehole is covered by transfer line
40-09-06	S-109	0	98	98	2	09/07/03		06/05/02	03/11/03						No apparent change; S-112 Retrieval
40-12-02	S-112	0	99	99	12	09/08/03		06/05/02	03/12/03						No apparent change; S-112 Retrieval
40-12-04	S-112	0	126	126	12	09/06/03		06/04/02	03/10/03						No apparent change; S-112 Retrieval
40-12-06	S-112	0	144	144	12	09/06/03		06/04/02	03/10/03						No apparent change; S-112 Retrieval
40-12-07	S-112	0	98	98	12	09/07/03		06/04/02	03/11/03						No apparent change; S-112 Retrieval
40-12-09	S-112	0	99	99	12	09/07/03		06/05/02	03/11/03						No apparent change; S-112 Retrieval
41-00-02	SX-101	40	80	40	14	04/12/00									BE - Cs-137
41-00-08	SX-109	40	90	50	58	08/09/03		08/20/01	03/28/02	09/06/02	02/10/03				No apparent change

Appendix D. Boreholes Projected for Monitoring During the 4th Quarter of FY 2003

Borehole Number	Tank	Top	Bottom	Footage	Total Score	Next Log Date	HRLS	RAS Event A	RAS Event B	RAS Event C	RAS Event D	RAS Event E	RAS Event F	RAS Event G	Comment
41-01-06	SX-101	25	80	55	39	09/04/03		09/06/01	09/09/02						No apparent change
41-01-10	SX-101	40	80	40	51	09/01/03		09/07/01	09/06/02						No apparent change
41-02-02	SX-102	25	139	114	82	08/03/03		09/07/01	03/26/02	09/06/02	02/04/03				Possible change not confirmed; possible Sr-90
41-02-08	SX-102	40	80	40	70	09/04/03		09/10/01	09/09/02						No apparent change; possible Sr-90
41-02-11	SX-102	20	80	60	70	09/04/03		09/07/01	09/09/02						No apparent change
41-07-05	SX-107	40	75	0	44	04/14/03	04/19/02	09/25/01							No apparent change; HRLS 04/19/02
41-07-07	SX-107	40	74	25	56	08/23/03	04/19/02	09/26/01	04/09/02	02/24/03					No apparent change; HRLS 04/19/02
41-07-08	SX-107	40	76	46	56	03/16/02		09/17/01							Vent pipe obstruction FY 02
41-08-02	SX-108	40	75	40	40	09/11/03		09/24/01	09/16/02						No apparent change
41-08-04	SX-108	35	76	41	52	09/04/03		09/17/01	09/09/02						No apparent change
41-08-07	SX-108	40	65	0	52	04/13/03	04/18/02	09/25/01							No apparent change; HRLS 04/18/02
41-08-11	SX-108	40	75	0	40	04/13/03	04/18/02	09/26/01							No apparent change; HRLS 04/18/02
41-09-03	SX-109	40	74	0	46	04/17/03	04/22/02	09/26/01							No apparent change; HRLS 04/22/02
41-09-04	SX-109	40	102	62	58	03/08/00									Not logged due to bh contamination
41-09-07	SX-109	40	73	35	58	08/12/03	04/22/02	10/03/01	04/05/02	02/13/03					No apparent change; HRLS 04/22/02
41-09-09	SX-109	40	95	66	58	08/12/03		10/03/01	04/05/02	02/13/03					No apparent change
41-10-01	SX-110	40	80	40	54	08/10/03		09/13/01	04/01/02	02/11/03					Possible ongoing Cs-137 increase at 66 ft
41-11-09	SX-111	40	75	35	42	09/04/03		09/17/01	09/09/02						No apparent change
41-11-10	SX-111	40	95	69	54	08/23/03	04/18/02	09/25/01	04/09/02	02/24/03					No apparent change; HRLS 04/18/02
41-12-02	SX-112	40	122	0	63	04/18/03	04/23/02	10/03/01							No apparent change; HRLS 04/23/02
41-14-02	SX-114	40	76	36	15	06/17/00									BE - Cs-137
41-14-03	SX-114	40	75	35	15	06/20/00									BE - Cs-137
41-14-04	SX-114	40	85	45	15	06/16/00									BE - Cs-137
41-14-08	SX-114	40	80	40	15	06/21/00									BE - Cs-137
50-00-10	T-106	30	70	40	92	08/24/03		07/18/01	08/29/02						No apparent change
50-01-04	T-101	20	123	103	36	07/19/03	07/24/02	08/07/01							No apparent change; requires HRLS
50-01-06	T-101	30	87	57	48	08/23/03		07/30/01	08/28/02						No apparent change
50-01-12	T-101	30	70	40	36	08/23/03		07/30/01	08/28/02						No apparent change
50-03-06	T-103	30	120	90	28	03/20/99									Water in BH 01/02- not logged
50-04-10	T-104	30	87	57	55	08/13/03		07/31/01	01/22/02	08/29/02	12/16/02	05/15/03			Apparent change 67-68 ft
50-05-06	T-105	30	90	60	27	04/17/99									Water in BH 01/02- not logged
50-05-11	T-105	30	120	90	39	08/23/03		07/25/01	08/28/02						No apparent change
50-06-04	T-106	55	93	68	117	07/24/03	07/29/02	07/23/01							No apparent change
50-06-05	T-106	30	116	86	130	07/21/03	07/26/02	08/06/01							No apparent change; requires HRLS
50-06-06	T-106	65	120	95	130	07/24/03	07/29/02	07/24/01							No apparent change
50-06-08	T-106	46	120	109	130	07/24/03	07/29/02	07/25/01							No apparent change
50-06-11	T-106	30	83	53	117	08/22/03		07/19/01	08/27/02						No apparent change
50-06-16	T-106	30	86	61	130	08/29/03		07/24/01	09/03/02						No apparent change
50-06-17	T-106	30	87	57	117	07/25/03	07/30/02	08/07/01							No apparent change; requires HRLS
50-06-18	T-106	25	130	110	142	09/16/03		08/01/01	01/29/02	09/03/02	12/31/02	06/18/03			Poss. Incr. 117-119 ft (Co-60), poss. ongoing 6/18/03
50-07-07	T-107	30	70	40	42	04/07/00									No log - water filled (06/18/01)
50-08-11	T-108	30	120	90	27	05/13/99									Water in BH 01/02- not logged
50-11-11	T-111	30	80	50	19	01/02/03									
51-00-03	TX-105	40	80	40	14	03/07/01									BE - Cs-137
51-00-07	TX-104	40	110	70	29	09/07/03		09/12/02							No apparent change
51-01-06	TX-101	40	80	40	27	09/07/03		09/12/02							No apparent change
51-01-08	TX-101	40	90	50	27	09/07/03		09/12/02							No apparent change
51-01-09	TX-101	40	80	40	27	12/21/96									Borehole cannot be located
51-03-09	TX-103	40	97	57	55	07/13/03		05/13/02	01/14/03						No apparent change

Appendix D. Boreholes Projected for Monitoring During the 4th Quarter of FY 2003

Borehole Number	Tank	Top	Bottom	Footage	Total Score	Next Log Date	HRLS	RAS Event A	RAS Event B	RAS Event C	RAS Event D	RAS Event E	RAS Event F	RAS Event G	Comment
51-03-11	TX-103	40	99	59	30	07/14/03		05/20/02	01/15/03						Possible change 61-62 and 90-95 ft, No additional changes
51-04-05	TX-104	40	97	57	54	07/13/03		05/16/02	01/14/03						No apparent change
51-05-05	TX-105	40	98	58	64	07/12/03		05/17/02	01/13/03						No apparent change
51-05-07	TX-105	40	106	66	64	07/13/03		05/17/02	01/14/03						No apparent change
51-14-04	TX-114	40	97	62	34	09/11/03		09/16/02							No apparent change
51-14-08	TX-114	40	85	45	34	09/07/03		09/12/02							No apparent change
51-14-11	TX-114	40	99	59	34	09/07/03		09/12/02							No apparent change
51-16-04	TX-116	35	80	45	38	09/07/03		09/12/02							No apparent change
51-18-01	TX-118	35	80	45	17	03/30/01									BE - Cs-137; Co-60 @ 29 & 51'
51-18-05	TX-118	35	100	65	17	03/24/01									BE - Cs-137; Co-60 @ 96 ft
51-18-11	TX-118	40	80	40	17	03/31/01									BE - Cs-137; Co-60 @ 45 ft
52-01-05	TY-101	35	80	45	26	08/17/03		08/22/02							No apparent change
52-01-09	TY-101	35	99	64	26	08/17/03		08/22/02							No apparent change
52-02-11	TY-102	35	80	45	29	08/17/03		08/22/02							No apparent change
52-03-06	TY-103	40	100	60	56	08/20/03		05/02/02	05/21/02	08/22/02	12/04/02	05/22/03			Definite change 55-60 ft; report issued 5/14/02
52-06-02	TY-106	40	65	25	16	05/02/03		05/07/02							No apparent change
52-06-05	TY-106	40	147	107	66	08/25/03		05/08/02	12/04/02	05/27/03					Possible change 130-148 ft, ongoing 12/04/03, 5/27/03
60-04-08	U-104	40	118	78	94	05/27/03		07/16/01	10/22/01	01/03/02	04/10/02	08/27/02	11/14/02	02/26/03	Apparent change (74-78 and 84-89 ft) not confirmed
60-04-10	U-104	35	94	59	69	08/22/03		07/16/01	08/27/02						No apparent change
60-05-04	U-105	35	72	37	44	06/01/03		07/16/01	10/24/01	08/27/02	11/14/02	03/03/03			No apparent change
60-05-05	U-105	35	123	88	44	05/27/03		07/16/01	08/27/02	11/13/02	02/26/03				Possible increase 75-80 ft
60-07-01	U-107	0	98	98	85	06/03/03		07/12/01	10/04/01	12/26/01	04/10/02	08/23/02	11/05/02	03/05/03	Apparent change 83-88 ft not confirmed
60-07-02	U-107	0	125	125	53	06/03/03		07/12/01	10/04/01	12/26/01	04/15/02	08/23/02	11/04/02	03/05/03	Apparent decrease 90-100 ft not confirmed
60-07-10	U-107	0	98	98	85	06/04/03		07/09/01	10/24/01	12/27/01	04/15/02	08/26/02	11/05/02	03/06/03	Apparent change (SGLS); 53-65 ft not confirmed
60-07-11	U-107	0	124	124	85	06/03/03		07/12/01	10/24/01	12/27/01	04/15/02	08/26/02	11/05/02	03/05/03	Apparent change (SGLS); 73-95 ft not confirmed
60-08-04	U-108	0	127	127	56	06/04/03		07/09/01	10/25/01	12/28/01	04/15/02	08/27/02	11/05/02	03/06/03	No apparent change
60-10-01	U-110	0	125	125	10	06/01/03		07/17/01	10/04/01	12/27/01	04/11/02	08/26/02	11/06/02	03/03/03	No apparent change, U-107 Retrieval
60-10-07	U-110	35	75	40	35	08/21/03	07/18/02	07/17/01	08/26/02						No apparent change
60-10-11	U-110	0	98	98	10	06/01/03		07/17/01	10/04/01	01/02/02	04/11/02	08/26/02	11/06/02	03/03/03	No apparent change, U-107 Retrieval
60-12-01	U-112	35	125	60	34	07/12/03	07/17/02	11/06/01							No apparent change; requires HRLS